UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/301,438	04/28/1999	CHRISTOPHER K. WOLF	NS-3799US	5559

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EXAMINER
NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/301,438	WOLF ET AL.
	Examiner	**Art Unit**	
	Steven HD Nguyen	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 July 2004 and 05 January 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>41-82</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>41-82</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *   c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment filed 12/10/03, 12/23/03 and 2/11/04 are objected to under 35

U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no

amendment shall introduce new matter into the disclosure of the invention. The added material

which is not supported by the original disclosure is as follows:

Page 7, lines 4-5, "which is typically a first in first or (FIFO) buffer" is deleted from the

specification.

Page 7, lines 7, page 10, lines 12, 26, 27, page 11, line 30, page 23, 29-30, "FIFO" which

is replaced by buffer.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 41-52, 55-60, 62-75 and 78-82 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Okada (USP 5668601) in view of Maturi (USP 5559999).

Regarding claims 41-52, 55-60, 62-75 and 78-82, Okada discloses A decoder system

comprising: a control unit (Fig 1, ref 14); a data buffer comprising a video input buffer (Fig 1,

Ref 22) and an audio input buffer (Fig 1, Ref 12); a stream demultiplexer (Fig 1, Ref 5) for

receiving an incoming data stream comprising data packets each comprising at least one of (i)

encoded video data and a video header that contains video timing information for the encoded

video data and (ii) encoded audio data and an audio header that contains audio timing

information for the encoded audio data, the stream demultiplexer operating (a) to demultiplex

and depacketize the data packets without interrupting the control unit, (b) to send the encoded

video data to the video input buffer for storage there without the video timing information (Fig 1,

PCR and PTS is extracted from video stream before forwarding to the video buffer 12), (c) to

provide, for use by the control unit, video messages which identify where the encoded video data

is stored in the video buffer and which also deal with the video timing information (See Fig 4,

Stage stack), and (d) to send the encoded audio data to the audio input buffer for storage there

(Fig 1, audio stream forwards to the buffer by demultiplexing 5); a video decoder that decodes

the encoded video data to produce decoded video data utilizing video instructions provided from

the control unit as to where the encoded video data is stored in the video input buffer (Fig 1, Ref

23); and an audio decoder that decodes the encoded audio data to produce decoded audio data

(Fig 13) and a video output processor for processing the decoded video data to produce

processed video data suitable for video presentation and an audio output processor for processing

the decoded audio data to produce processed audio data suitable for digital to analog conversion

(Fig 1, Ref 13 and 23). However, Okada fails to disclose a step of providing identify where the

encoded video data is stored in the video input buffer and audio messages which identify the

location of encoded audio data in the audio buffer and PTS and system clock and timer for

maintaining local time. In the same field of endeavor, Maturi discloses a method and apparatus

for providing the tags to the control unit which contain PTS and location of address buffer for

video and audio data (Fig 4) for storing in the RAM; system clock and timer for maintaining

local current time (Fig 3, Ref 40) and message queue (Fig 3, Ref 18a) wherein the video decoder

decoded the video signal based on interrupt signal in response to sync signal (Fig 7 and col. 6,

lines 58 to col. 7, lines 21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to apply a method of providing a control unit with tags that includes timing

and location of the encoded audio and video data as disclosed by Maturi into Okada's system.

The motivation would have been to reduce the number times that demultiplexing device

generates the interrupted signals for transmitting to the controller.

Regarding claims 66 and 82, Okada fails to disclose the claimed invention. However, the

examiner takes an official notice that DVB receiver is well known and expected in the art at the

time of invention was made. Therefore, it would have been obvious to one of ordinary skill in

the art at the time of invention was made to apply an interface for receiving a DVB signal into

the decoder of Okada and Maturi. The motivation would have been to provide a system with

multiple receivers.

4.   Claims 53-54 and 76-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Okada and Maturi as applied to claims 41 and 67 above, and further in view of Nuber (USP

5703877).

Regarding claims 53-54 and 76-77, Okada and Maturi fail to disclose the claimed

invention. However, in the same field of endeavor, Nuber discloses an audio decoder detects

audio sync words in the encoded audio data and control unit utilizes the audio timing information

and the audio sync words provided from the audio decoder to detect presentation times for the

decoded data (Fig 4 and col. 4, lines 28-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to apply a method of using a sync word and presentation time of data packet

for determining the output presentation time for audio data as disclosed by Nubber's system into

the decoder of Okada and Maturi. The motivation would have been to synchronize between the

audio and video signals.

5.   Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okada and

Maturi as applied to claim 41 above, and further in view of Terashima (USP 6163647).

Regarding claim 61, Okada and Maturi fail to disclose the claimed invention. However,

in the same field of endeavor, Terashima discloses the buffers (Fig 1, Ref 13 and 23) for

coupling between the audio decoder and video decoder (Fig 1, Ref 12 and 22) and audio

processor and video processor (Fig 1, Ref 14 and 24) wherein the audio processor retrieving the

decoded audio data from the audio output buffer for processing and input to a audio digital to

analog converter (Fig 1, Ref 1) and the video processor retrieving the decoded video data from

the video output buffer for processing and input to a video display (Fig 1, Ref 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention was made to apply the buffers between the decoders and processors as disclosed by

Terashima's system into the decoder of Okada and Maturi. The motivation would have been to

synchronize between the audio and video signals.

Response to Arguments

6.   Applicant's arguments filed 7/29/04 and 1/5/05 have been fully considered but they are

not persuasive.

In response to pages 4-6, the applicant states that the deleted of " which is typically a

First-In-First-Out (FIFO) buffer is not new matter because it is a terminology error by the

person(s) who prepared the present application. Furthermore, the applicant states that buffer

includes 32 sub buffer. Therefore, it can not be FIFO buffer because the information in the sub

FIFO buffer can be accessed one of a time and the applicant can not deleted the term FIFO in

order to simultaneous access the sub buffers. In reply, it is a new matter because the applicant

defined the buffer which is FIFO buffer. The applicant can not deleted it in order to modify the

scope of the specification.

In response to applicant's argument in pages 17-21 that there is no suggestion to combine

the references, the examiner recognizes that obviousness can only be established by combining

or modifying the teachings of the prior art to produce the claimed invention where there is some

teaching, suggestion, or motivation to do so found either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art or the nature of the problem to

be solved. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958

F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992) and In re Rouffet, 149 F.3d 1350, 47 U.S.P.Q.2d

1453 (Fed. Cir. 1998). In this case, Okada discloses a method and system for demultiplexing the

mepg signal into video for storing in buffer 12, audio for storing in buffer 22, video PTS for

storing in register 21 and audio PTS for storing in register 11, wherein the PTS is used to

generate a tag includes PTS and a address of the video data that stored in the buffer 22 *without*

interrupt the controller, See Fig 4 and 7. Maturi discloses a method and system for

demultiplexing and depacketizing the mpeg signal into video data 20b, audio data 20d, video

header 20a, audio header 20c, which includes a tag and PTS. Upon detecting the tag and PTS an

interrupt signal is forwarded to CPU in order to allow the CPU for storing the information in a

list "RAM" to be used by the control unit (See col. 2, lines 65 to col. 3, lines 6; See col. 5, lines

37 to col. 6, lines 48). Therefore, it would have been obvious to one of ordinary skill in the art at

the time of the invention was made to apply a method of providing a control unit with tags that

includes timing and location of the encoded audio and video data as disclosed by Maturi into

Okada's system. The motivation would have been to reduce the number times that

demultiplexing device generates the interrupted signals for transmitting to the controller.

In response to applicant's argument in pages 18-19, the applicant states that the teaching

of the references does not disclose the demultiplexing and depacketizing of the data packets be

done without interrupting the control unit. In reply, Okada disclose in Fig 1, Ref 5

demultiplexing for demultiplexing and depacketizing the audio and video packet without

interrupting the controllers.

In response to applicant's argument in pages 19-20, the applicant states that the examiner

can not combined the references because Okada's signals are already synchronized therefore it

does not need Maturi's reference. In reply, the examiner only use a step of providing identify

where the encoded video data is stored in the video input buffer and audio messages which

identify the location of encoded audio data in the audio buffer and PTS and system clock and

timer for maintaining local time of Maturi's reference in the rejection in order to combine the

references. Therefore, it is permissible because the examiner recognizes that obviousness can

only be established by combining or modifying the teachings of the prior art to produce the

claimed invention where there is some teaching, suggestion, or motivation to do so found either

in the references themselves or in the knowledge generally available to one of ordinary skill in

the art or the nature of the problem to be solved. In this case, the references are in the same field

of endeavor such demultiplexing and depaketizing the input signals for using in the decoder such

as audio and video wherein tag, system timer and PTS are well known and expected in the art.

7.   In response to applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re*

Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The teaching of the references performs the claimed invention. Therefore, the rejection is

maintained.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,
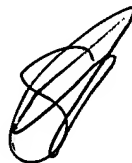
however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159.

The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D Vu can be reached on (571) 272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
4/22/05